

Oblique Marked Relatives in Southern Interior Salish: Historical Implications for a Movement Analysis

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This paper investigates the distribution of the oblique marker *t* in relative clauses in the Upper Nicola dialect of Okanagan and Nxaʔamxcín (Willett, 2003), specifically in light of relative clauses in the Northern Interior Salish languages St'át'imcets (Davis, 2004, 2010) and Nl̓əʔkepmxcín (Kroeber, 1997, 1999; Koch, 2004, 2006) which show evidence for movement of a clause-internal DP to the left periphery of CP. Data from Southern Interior Salish languages also show evidence for clause-internal movement, but the distribution of the oblique marker suggests that the landing site of the moved DP is in a higher position. This distinction between Northern and Southern Interior Salish may be construed as evidence for a historical split with regards to relative clause formation, and may have occurred at roughly the same time as the inversion of prepositions to a DP-internal position in the Southern Interior.

1 Introduction

Okanagan, Nxaʔamxcín (a.k.a. Moses-Columbian), Coeur d'Alene and the dialect continuum known as Spokane-Kalispel-Flathead comprise the Southern Interior sub-branch of the Salish language family. Okanagan is spoken in South-central British Columbia and North-central Washington. It is critically endangered, being spoken by only about 400 speakers. The Upper Nicola dialect of Okanagan is centered around the Douglas Lake (Spáʔmən) and Quilchena (Nl̓q̓ʔməl̓x) reserves, close to the city of Merritt, B.C., by perhaps as few as 12 speakers. Nxaʔamxcín is spoken in central Washington, primarily in Colville territory, by fewer than forty speakers (Willett, 2003, 3).

Southern Interior Salish languages have syntactic structures which may be described as relative clauses, in the sense that these clauses contribute information which further specifies the referent of a head noun (Kroeber, 1999). A case may

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also be made for a more formal definition, where a relative clause consists of a “syntactically complex modifier involving abstraction over an internal position of the clause (the relativization site) and connected to some constituent it modifies (the relative “head”)” (Bianchi, 2002). Example (1) shows a typical Okanagan relative in brackets. The determiner *i?* and the oblique marker *t* introduce the clausal remnant $\check{x}^w ilst\acute{a}m\ t_1$ “he/she was abandoned by x”. This clause modifies an NP head $sqilx^w$ “people”.^{1,2}

- (1) ixíʔ, uł **i?** **sqilx**² [[i? t [$\emptyset_{NP_2}$]_{DP1}] $\check{x}^w ilst\acute{a}m$
 DEM CONJ DET people DET OBL abandon-CAUS-PASS
 t_{1CP}] k^wuk^w cútləx “way cak^w ʔawsʔácntəm
 gap EVID say-3PL.ABS yes DEON go-look-DIR-1PL.ERG
 mat stim i? cáwts.”
 EVID what DET doings-3SG.POSS
 Meanwhile, **the people who abandoned him**, they said “We should go see
 what he’s doing.” (from Upper Nicola legend)

It has been well-established that relative clauses in the Northern Interior Salish languages Nłəʔkepmxcín (a.k.a. Thompson) (Kroeber, 1997, 1999; Koch, 2006) and St’át’imcets (a.k.a. Lillooet) (Davis, 2004, 2010) are formed by movement of a clause-internal DP to the left-periphery of the relative clause CP, but besides Kroeber (1999), and a chapter in Willett (2003) on relative clauses in Nxaʔamxcín, little work has been done on relativization strategies of the Southern Interior. As illustrated by the bracketing in (1), I claim that clause internal movement also occurs in the formation of Okanagan relatives.³

This paper investigates several points pertaining to relativization in Okana-

¹Similar to other branches of the family, Southern Interior Salish languages lack a dedicated relative pronoun or complementizer.

²The determiner-oblique marker sequence *i? t*, in combination with the “passive” suffix *-m* indicate that it is the agent of the passive sentence (i.e. $sqilx^w$ “people”) which has been extracted. Since main-clause passive agent nominals are introduced by *i? t* and occur post-predicatively, the DP *i? t sqilx^w* in (1) must have raised from a post-predicative position at some point during the derivation.

See Koch (2006) and Davis (2010) for a discussion of evidence pertaining to whether a matching or raising analysis is correct for Nłəʔkepmxcín and St’át’imcets, respectively. Davis, for instance, concludes that some types of relatives in St’át’imcets require a matching analysis (Hulsey and Sauerland, 2006), however there is no evidence for raising in any St’át’imcets relatives. For the purposes of this paper, I assume that Okanagan patterns similarly to St’át’imcets, and therefore adopt the matching analysis as the null hypothesis. The subscript ‘2’ indicates that the external head noun is co-referent with the RC-internal one, which undergoes deletion through identity.

³Okanagan relatives, like St’át’imcets relatives (Davis, 2010), show evidence for an A’ dependency within the relative clause (Chomsky, 1977): resumptive pronouns are not permitted clause-internally, and long range extraction is possible, subject to strong island effects. For reasons of space, I do not include these data.

gan and the Southern Interior. First, I show that the formation of at least some relative clauses in Okanagan (and at least one other Southern Interior language, Nxaʔamxcín) involves movement of a clause-internal DP to the left-periphery of the relative clause. Secondly, I show that certain classes of oblique-marked relative clauses in Okanagan and Nxaʔamxcín, which at first seem to defy a movement analysis, are explained if the moved DP lands in a higher position than the Spec CP position argued for by Davis (2010) for St’át’imcets. I claim that this difference represents a more general split between relative clause formation in the Northern and Southern Interior languages. Finally, I suggest that diachronically, there is a causal relation between the DP-internal “prepositions” characteristic of languages in the Southern Interior, and the structure of relative clauses in these languages. More specifically, inversion of prepositions to a DP-internal position may have conditioned a change in relative clause formation in the Southern Interior.

The paper is organized as follows: Section 2 discusses some basic facts about Okanagan DP structure, and introduces relative clauses. Section 3 summarizes the theory of relative clause formation by movement, and presents data showing that certain classes of relative clauses in Okanagan support a movement analysis for this language. Section 4 presents Okanagan data involving certain types of oblique-marked relative clauses which are problematic for the movement analysis, and then discusses similar data in other Interior Salish languages, which prove illuminating to the problem at hand. Section 5 presents my solution to this problem. Section 6 discusses further historical implications of this analysis. Section 7 raises further questions, and section 8 concludes.

2 Introducing Okanagan relatives

2.1 Okanagan DP Structure

Okanagan, like other Salish languages, is verb-initial, however in transitive sentences involving two overt nominal arguments, subject-verb-object (SVO) is an unmarked word order. The language exhibits a tight correlation between predicate transitivity and argument marking. While subject nominals will always be introduced by a determiner *iʔ*, object nominals are only introduced by *iʔ* if the predicate is formally transitive, as in (2a) (Lyon, 2011). If the predicate is formally intransitive, an object nominal will always be introduced by the oblique marker, as in (2b).⁴

⁴By formally transitive, I refer to predicates which are affixed by any one of several transitivizers: *-nt-* ‘directive’, *-st-* ‘causative’, *-cit-* ‘transitive applicative’, *-t-* ‘ditransitive applicative’. Such predicates take ergative subject morphology. For the purposes of this paper, ‘formally transitive’ also subsumes transitive nominalized possessive predicates, i.e. those predicates with possessor subjects,

- (2) a. tkíc-ən [iʔ sqəłtmíx^w_{DP}] ʔapnáʔ sʔəlʔʔált.
 meet-(DIR)-1SG.ERG DET man now today
 I met a man today.
- b. kn tkíc-əm [t sqəłtmíx^w_{KP}] ʔapnáʔ sʔəlʔʔált.
 1SG.ABS meet-MID OBL man now today
 I met a man today.

Intransitive objects like (2b) are not DPs, since the oblique marker *t* is not a determiner (Lyon, 2011). In specific grammatical environments, the determiner *iʔ* and the oblique marker *t* may co-occur, as when marking an instrument (3a). The determiner *iʔ* also co-occurs with the locative markers *kl* ‘to/towards’, *l* ‘at/on/in’, and *tl* ‘from/than’ (3b).⁵ Together, these yield a structure resembling an English prepositional phrase except that the ‘preposition’ occurs internal to the DP (Kroeger, 1999, 71).⁶

- (3) a. ʔapəntís [iʔ [t swlwlmínk_{KP}]_{DP}].
 shoot-DIR-3SG.ERG DET OBL gun
 He shot it with a gun.
- b. John npúsəs [iʔ [l ʔkap_{KP}]_{DP}].
 John cook-(DIR)-3SG.ERG DET LOC pot
 John cooked it in the pot.

Because locative markers and the oblique marker are in complementary distribution, it is reasonable to assume that they occur in the same syntactic position. I label both oblique-marked nominals (3a) as well as nominals which form a constituent with a locative marker (3b) as KPs, since the oblique marker and the set of locative markers both carry case information, and designate a nominal as standing in an oblique grammatical relation to the main predicate.^{7,8} Evidence that the

which may take a nominal DP object. By formally intransitive, I refer to predicates which are affixed by one of several intransitivizers: *-əm* ‘middle’, *-(aʔ)x* ‘intransitive’. Such predicates take absolutive subject morphology, and oblique-marked objects, never full DPs.

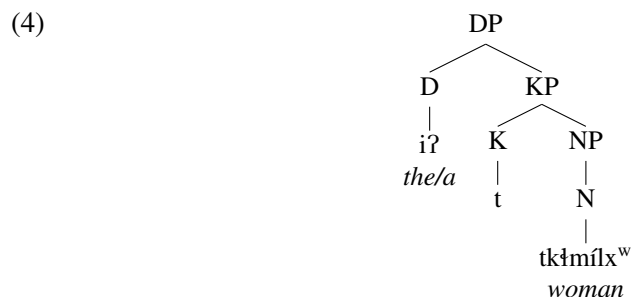
⁵See Mattina (1973, 117) for further description of these particles.

⁶This DET-PREP ordering is a general feature of all languages in Southern Interior Salish, and contrasts with the PREP-DET ordering exhibited by the rest of the family. Kroeger (1999, 72) hypothesizes that “this peculiarity is readily explained if articles in these languages derive diachronically from demonstrative particles outside DP, or loosely adjoined to it, rather than from articles occupying the determiner slot within DP.” I suggest an alternative analysis which is somewhat at odds with Kroeger’s.

⁷The oblique marker signals that a nominal is a *core oblique*, and a locative marker signals that a nominal is a *non-core-oblique*, or locative adjunct in other words (Kroeger, 1999, 42-44).

⁸Bittner and Hale (1996) posit KP as the nominal equivalent of CP in the verbal domain. They

oblique marker and locative markers project their own syntactic category comes from conjunction (Lyon, in prep.), and NP-deletion in relative clause formation. I assume the following basic DP structure for Okanagan:



The distribution of the determiner *iʔ* and the oblique marker and locative markers across various grammatical categories is shown in the table below.

	D	K	N
Subjects	<i>iʔ</i>	∅	tkʔmɪlxʷ
Transitive objects	<i>iʔ</i>	∅	tkʔmɪlxʷ
Oblique objects	∅	<i>t</i>	tkʔmɪlxʷ
Applicative (- <i>xt</i> -) Themes	∅	<i>t</i>	tkʔmɪlxʷ
Passive agent obliques	(<i>iʔ</i>)	<i>t</i>	tkʔmɪlxʷ
Instrumental obliques	(<i>iʔ</i>)	<i>t</i>	tkʔmɪlxʷ
Locative adjuncts	(<i>iʔ</i>)	{ <i>kʔl</i> , <i>l</i> , <i>tl</i> }	tkʔmɪlxʷ

Table 1. *Distribution of Nominal-Introducing Particles in Okanagan*

This distribution provides important evidence for an analysis in which relative clauses in Okanagan are formed by clause-internal movement of a DP.

assume that K selects a DP for an argument, rather than D selecting a KP which is what I assume for Okanagan. My analysis is non-standard, since the relation between the selecting predicate head and the case-marked nominal is non-local (i.e. there is an intervening D-head). But despite being non-standard, some version of my analysis may be necessary, since it is undesirable to assume for (4) that *iʔ* is a K, or that *t* is a D. There are 2 main points against this: First, such an analysis must analyze DP-internal locative markers as determiners, which ignores the fact that historically they were never determiners. Second, *iʔ* is semantically speaking a context-sensitive domain restrictor (Lyon, 2011), a role argued by Gillon (2009) to be universally associated with the D position. Also, under the assumption that D always selects for a KP, there must be a null case-marker for subject and transitive object DPs.

2.2 Relative Clauses

Relative clauses may modify an NP directly dominated by either a DP (5), or a KP (6). Additionally, the modifying clause may either precede or follow the head, as may be seen by comparing (5a) with (5b), and (6a) with (6b).

- (5) a. way' čaʔ-nt-ís iʔ sqəłtmíx^w iʔ wik-s.
 yes punch-DIR-3SG.ERG DET man DET see-(DIR)-3SG.ERG
 He hit the man he saw.
- b. way' čaʔ-nt-ís iʔ wik-s iʔ sqəłtmíx^w.
 yes punch-DIR-3SG.ERG DET see-(DIR)-3SG.ERG DET man
 He hit the man he saw.
- (6) a. John k^wul'-əm t yamx̣^waʔ t
 John make-MID OBL basket OBL
 kɬ-s-n-q̣^wíł-tən-s.
 UNR.POSS-NOM-n-pack-INSTR-3SG.POSS
 John made the basket he was going to carry.
- b. John k^wul'-əm t kɬ-s-n-q̣^wíł-tən-s t
 John make-MID OBL UNR.POSS-NOM-n-pack-INSTR-3SG.POSS OBL
 yamx̣^waʔ.
 basket
 John made the basket he was going to carry.

I refer to head-initial relatives like (5a) and (6a) as *post-nominal*, and head-final relatives like (5b) and (6b) as *pre-posed*, following Davis (2010). Okanagan relatives must have particles (i.e. determiners and/or case markers) introducing both

the head and the clausal remnant.⁹

Any grammatical role may be relativized in Okanagan. In addition to the relativized transitive and intransitive objects seen above in (5) and (6), subjects may be relativized (7) as well as themes of ditransitives (9):

- (7) **iʔ** sqəltmíx^w **iʔ** qəy'-nt-ís iʔ qəy'mín k^wu
 DET man DET write-DIR-3SG.ERG DET book 1SG.GEN
 x^wíç'-xt-s əntsʔa t i-kł-qəy'mín.
 give-DITR-3SG.ERG 1SG.INDEP OBL 1SG.POSS-UNR.POSS-book
 The man who wrote the book gave me a book.

- (8) k^win-t **iʔ** qáq^wxəlx **iʔ** x^wíç'-xt-m-n.
 take-DIR DET fish DET give-DITR-2SG.ACC-1SG.ERG
 Take the fish that I'm giving you.

Unlike many other Salish languages, Okanagan relative clauses do not exhibit any special inflectional pattern. In other words, pronominal morphology found on relative clauses may also be found in main clauses (Kroeber, 1999).¹⁰ (9a) shows a pre-posed object relative inflected with an ergative subject, and (9b) shows the

⁹This effectively excludes *pre-nominal* (DET [CLAUSE NP]) and *post-posed* (DET [NP CLAUSE]) relatives as possibilities in Okanagan, although they are possible in other Salish languages, as shown in the following chart:

	Pre-nominal	Post-posed	Post-nominal	Pre-posed
St'át'imcets	✓	✓	✓	x
Nl̓əʔkepmxcín	x	x	✓	✓
Okanagan	x	x	✓	✓
Nxaʔamxcín	✓	✓	(✓)	x

In Nxaʔamxcín, post-nominal relatives are possible (Mattina, 2006, 124), but the oblique marker is becoming 'optional' here (Willett, 2003, 109). I discuss my analysis of Nxaʔamxcín pre-nominal relatives in section 5.

¹⁰There are nevertheless differences in the distribution of main versus subordinate clause inflectional patterns. It is difficult to extract an intransitive oblique object from a predicate inflected with the *-m* or (*-míxəʔ*)x intransitive suffixes, although apparently possible with a third person subject:

- (i) kn x̣mínk-əm t siwłk^w t ks-síwst-x i-sláx̣t.
 1SG.ABS want-MID OBL water OBL FUT-drink-INTR 1SG.POSS-friend
 I want some water for my friend to drink.

On the other side of the coin, nominalized possessor predicates, such as *i-sc-wík* "my seeing"/"I saw" in (9b), are generally not used as main-clause predicates, although nominalized future forms inflected with a middle suffix, such as *i-ks-púlstəm* "I'm going to beat him" are often found in non-embedded contexts.

corresponding nominalized object relative with a possessor subject.^{11,12}

- (9) a. $\text{t}^{\text{h}}\text{á}\text{p}\text{-nt-ín}$ $i?$ wík-ən $i?$ $\text{skək}^{\text{h}}\text{áka}?$.
 shoot-DIR-1SG.ERG DET see-(DIR)-1SG.ERG DET bird
 I shot the bird that I've seen.
- b. $\text{t}^{\text{h}}\text{á}\text{p}\text{-nt-ín}$ $(i?)$ $i\text{-sc-wík}$ $i?$ $\text{skək}^{\text{h}}\text{áka}?$.
 shoot-DIR-1SG.ERG (DET) 1SG.POSS-PERF-see DET bird
 I shot the bird that I've seen.

When transitive subjects are relativized, speakers often prefer to passivize the predicate. In (10), the clausal remnant is inflected as passive by the suffix *-m*, and is introduced by the sequence *i? t*, which together indicate that the passive agent has been extracted:¹³

- (10) $\text{sc-}^{\text{h}}\text{á}\text{a}^{\text{h}}\text{á}\text{a}^{\text{h}}\text{-ám-s}$ $i?$ $\text{səx}^{\text{w}}\text{ma}^{\text{h}}\text{máya}^{\text{h}}\text{-m-s}$ $i?$ t
 IMPF-look.for-MID-3SG.POSS DET teacher-3SG.POSS DET OBL
 knxít-(t)-m $i?$ l $\text{sənqəy}^{\text{h}}\text{míntən}$.
 help-DIR-PASS DET LOC school
 He's looking for the teacher that helped him at school.

Headless relatives are also common in Okanagan (11). I assume that these are a special type of post-nominal relative, where the head noun, and its selecting determiner, are both null.¹⁴

¹¹The exact semantic difference between (9a) and (9b), if there actually is one, remains unclear. Speakers indicate that nominalized forms like (9b) are past-tense completive, while ergative forms like (9a) are present-tense completive, but my research suggests that there is no clear demarcation between the two, and that both can be uttered felicitously within an identical discourse situation. Nominalized relatives may have less clausal structure than relatives inflected with ergative subjects (Thompson, 2011), but since nominalized clauses can function as main predicates in Okanagan and select for DP arguments, the case can also be made that extraction of such an argument from a nominalized clause involves clause-internal movement. On that note, it is not yet established whether there is any difference between predicate and clausal nominalization in subordinate clause contexts, since there are no pre-predicative auxiliaries in Okanagan to which a nominalizer might attach, thereby providing evidence for a distinction between predicate and clausal nominalization.

¹²The determiner *i?* regularly elides before 1st person possessive prefix *in-* and 2nd person possessive prefix *an-*, as in (9b), and lowers to *a?* before customary prefix *(a)c-*, as in (11b).

¹³See example (1) for a similar case.

¹⁴Davis (2010) argues against a similar analysis for St'át'imcets, instead claiming that relatives in this language are all derived from a common pre-nominal structure. His analysis will not work for Okanagan, however, since Okanagan (unlike St'át'imcets) has pre-posed relatives.

- (11) a. qəyntíx^w iʔ q^wəlq^wílstmən.
 write-DIR-2SG.ERG DET speak-CAUS-2SG.ABS-1SG.ERG
 Write down what I'm telling you.
- b. kaʔkícən (iʔ) acslmístən.
 find-(DIR)-1SG.ERG (DET) CUST-lose-CAUS-1SG.ERG
 I found the one I was looking for.

Demonstratives appear to function as relative clause heads (12), but since demonstratives often adjoin to a constituent DP (Lyon, 2010), (12) may also be analyzed as a headless relative if we assume that the adjoined DP is null in these cases.

- (12) wík-ən ixíʔ iʔ ks-knxít-m-s.
 see-(DIR)-1SG.ERG DEM DET FUT-help-DIR-2SG.OBJ-3SG.ERG
 I saw the one who will help you.

I now move on to a more technical discussion of the syntactic processes involved in relative clause formation in Okanagan.

3 Relative clause formation by movement

As first noted by (Kroeber, 1997, 396) for Nłəʔkepmxcín, locative relative clauses seem to involve clause internal movement of a DP to the left periphery of a relative clause. Kroeber notes that in examples like (13), “...the preposition codes the relation of gap to relative clause predicate, not the relation of the whole relative clause to the matrix predicate.”

- (13) (w)ʔéx kn x^wíʔ-m te npúytn₂ [[n-e [Ø_{NP₂}]_{PP₁}]
 PROG 1SG look.for-MID OBL.DET bed in-DET
 x^wúy^ʔ wn ʔ^wóyt t_{1CP}]
 FUT 1SG.CONJ sleep
 I'm looking for a bed where I'm gonna' sleep. (Koch, 2006, 132)

In other words, because the preposition *n* “in” in (13) helps to specify the location of the sleeping event, and not the looking event, the preposition may plausibly be analyzed as having moved from a base position following the relative clause. Davis (2004) and Koch (2006) have shown for St'át'imcets and Nłəʔkepmxcín respectively, that the determiner also moves, or rather, the DP “pied-pipes” the preposition to a clause-initial position. This is illustrated by the bracketing in (13).¹⁵

¹⁵Since Nłəʔkepmxcín determiners vary with regards to their spatio-temporal properties, Koch (2006) is able to show that the determiner introducing the relative clause shows the spatio-temporal

Recall that for Okanagan, the oblique marker *t* and locative markers *kl*, *l* and *tl* may co-occur with *i?*. These particle sequences help provide evidence for clause-internal movement. In main clauses, the combination of *i?* and *t* introduces instruments and passive agents, as in (14), and the combination of *i?* and a locative particle designates a DP as a locative adjunct, as in (15) *i? tl sqəltmíx^w* “from the man”.

- (14) a. *tʰap-nt-ís* [*i?* [*t* *swlwlmínk_{KP}*]_{DP}].
 shoot-DIR-3SG.ERG DET OBL gun
 He shot it with a gun.
- b. Mike *ʕúmqs-nt-m* [*i?* [*t* *tkłmílx^w_{KP}*]_{DP}].
 Mike kiss-DIR-PASS DET OBL woman
 Mike was kissed by the woman.
- (15) *ac-yłt-mí-st-ləx* [*i?* [*tl* *sqəltmíx^w_{KP}*]_{DP}].
 CUST-run.away-APPL-CAUS-3PL.ERG DET LOC man
 They’re running away from the man.

In support of a movement analysis for Okanagan relatives, consider that when instruments and passive agents like those in (14) are relativized, the relative clause is introduced by both *i?* and *t*, as in (16):

- (16) a. *k^wu* *ʔi?q^w-m-ʔt* *i?* *nik-mn₂* [[*i?* *t* [*Ø_{NP2}*]_{DP1}]
 1SG.GEN show-DITR DET knife DET OBL
 nik-nt-x^w *t_{1CP}*].
 cut-DIR-2SG.ERG
 Show me the knife that you cut it with.
- b. Mike *wiks* *i?* *tkłmílx^w₂* [[*i?* *t* [*Ø_{NP2}*]_{DP1}]
 Mike see-(DIR)-3SG.ERG DET woman DET OBL
 ʕúmqs-nt-m *t_{1CP}*].
 kiss-DIR-PASS
 Mike saw the woman he was kissed by.

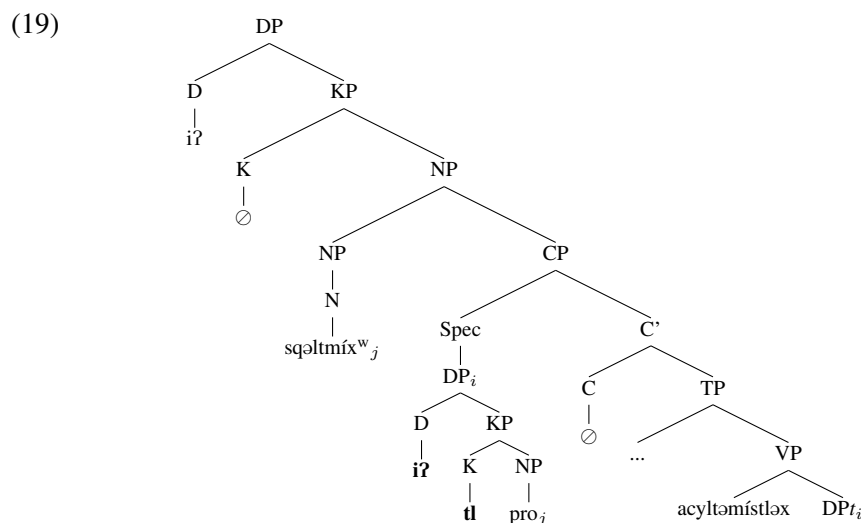
Note that *i?* and *t* normally only co-occur when introducing a passive agent

properties of the relative clause predicate, rather than the main clause predicate, confirming that movement also occurs in relatives which do not involve locative marking. For Okanagan, it is not possible to use different determiners as a diagnostic for movement, since there is only one determiner involved in relativization, *i?*. Nevertheless, the oblique marker *t* as well as the other locative markers, help to confirm that movement has occurred.

- Given that the distribution of the sequence *i? t* is limited to the same grammatical subset in both extraction and non-extraction contexts, the sequence *i? t* in (16) constitutes evidence for clause-internal movement.

(18) a. wik-ən iʔ sqəłtmíx^w₂ [[iʔ tɬ [⊙_{NP₂}]DP₁]
see-(DIR)-1SG.ERG DET man DET LOC
ac-yłt-mí-st-ləx t_{1CP}.
CUST-run.away-APPL-CAUS-3PL.ERG
I see the man that they're running away from.

- Following Davis (2010) and Koch (2006), it seems clear that for Okanagan (16) and (18) at least, a DP internal to the relative clause has raised to the left periphery of the relative clause CP. The noun in the moved DP then plausibly undergoes deletion through identity with the clause exterior head NP. The following structure is thus a plausible representation of the relative clause in (18a):



Assuming that *all* relative clauses in Okanagan are similarly formed, the structure in (19) implies that the sequence of particles introducing the clausal remnant should *always* code the relation of the gap to the relative clause predicate. This holds true in some cases. For example, consider that subject and transitive object extractions in Okanagan, e.g. (5) and (7), are characterized by having the determiner *iʔ* introduce both the head and the clausal remnant. Since transitive predicates always select for *iʔ* DP objects in main clause contexts (20a), the prediction is that when an object is extracted, the clausal remnant will be introduced by only a determiner *iʔ*. This prediction is upheld (20b).¹⁶

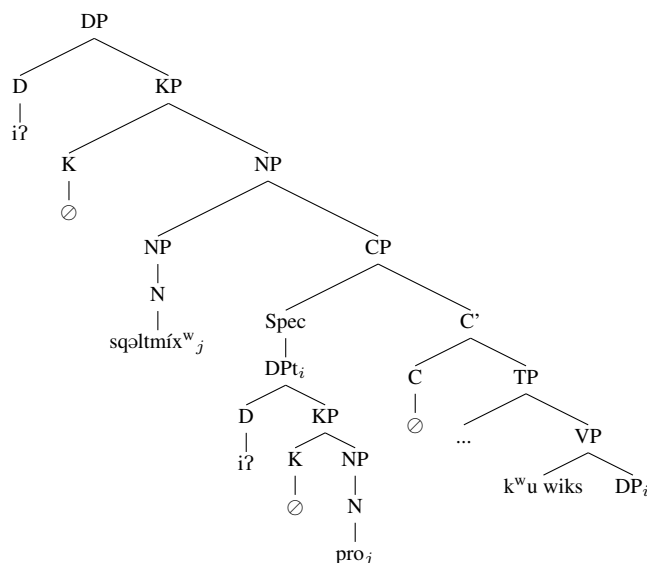
- (20) a. wik-s iʔ sqəltmíxʷ
 see-(DIR)-3SG.ERG man
 He saw the man.
- b. way' čaʔ-nt-ís iʔ sqəltmíxʷ iʔ wik-s.
 yes punch-DIR-3SG.ERG DET man DET see-(DIR)-3SG.ERG
 He hit the man he saw.

As a working hypothesis then, I assume that *all* Okanagan relatives are formed by clause-internal movement. Relative clauses are canonically post-nominal, and pre-posed relatives are derived from post-nominals by an additional movement of the relative clause CP to a position preceding the DP containing the head, presum-

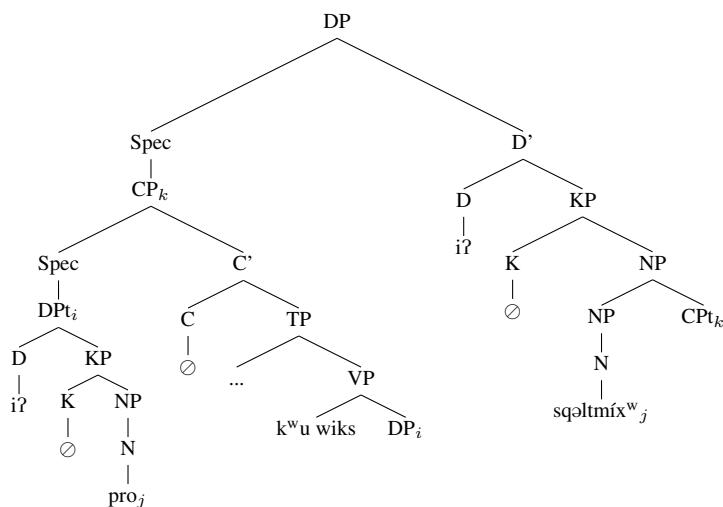
¹⁶But admittedly these constitute only weak support for movement, since as Koch (2006) notes for similar cases in Nl̓aʔkepmxcín, the two determiners may simply be copies of one another.

ably Spec DP.¹⁷ Compare the post-nominal relative clause *iʔ sqəłtmíx^w iʔ k^wu wíks* “the man who saw me” (21a) with its equivalent pre-posed version *iʔ k^wu wíks iʔ sqəłtmíx^w* (21b):

(21) a.



b.



Extending this movement account to all Okanagan relatives encounters several problems, however. First and foremost, the distribution of *t* before a clause

¹⁷Or possibly adjoined to DP. Pre-posed relatives in Okanagan are generally more marked than post-nominal forms, for reasons to be discussed.

does not always code the relation of the gap to the relative clause predicate.¹⁸ The next section discusses these problematic data.

4 Extending the movement account

4.1 Problematic cases of oblique marking

Not all relative clauses in Okanagan conform so nicely to the movement account described in the previous section. Consider that relative clause predicates may be inflected with the future prefix *ks-*. In these cases, the clausal remnant is often introduced by both *iʔ* and *t*, but this sequence does *not* code the relation of the gap to the relative clause predicate. (22) shows that in main clause contexts, a future transitive predicate cannot select for an object introduced by *iʔ t*¹⁹, yet in extraction contexts (23), the oblique marker *t* may co-occur with the determiner.²⁰

- (22) *ks-yaʔ-yáʔʃaʔ-səlx* *iʔ* (**t*) *pwmín*
 FUT-show-(DIR)-3PL.ERG DET (*OBL) drum
 They will look at a drum.

- (23) *way* *i-ks-kʷul-əm* *iʔ* *pwmín* *iʔ* (*t*)
 yes 1SG.POSS-FUT-make-MID DET drum DET (OBL)
 ks-yaʔ-yáʔʃaʔ-səlx.
 FUT-show-(DIR)-3PL.ERG
 I will make a drum that they will look at.

(24-25) show that the same pattern surfaces with subjects. In main clause contexts, subjects of future-inflected transitives may not be introduced by the oblique marker *t*, only by *iʔ*, but (25a,b) confirms that in extraction contexts, the sequence *iʔ t* is possible.

¹⁸Other issues which require further investigation are: (i) Whether KP movement (rather than DP movement) occurs for cases where a relative clause modifies a KP-contained head (6), or whether there may be a null determiner in the language; (ii) An explanation for the ‘matching effect’ displayed between the head-introducing and clause-introducing particles, a phenomenon which I touch on in the next section; (iii) Ditransitive theme extractions, which still do not follow from my extension of the movement account.

¹⁹Recall that for (22), an oblique marker is not possible, since ‘the drum’ is a grammatical object, and not an instrument or passive agent.

²⁰From this point onwards, I highlight the oblique marker which introduces a relative clause in blue type, to help the reader distinguish between this occurrence of *t*, and its other role as a nominal case marker.

- (24) *ks-knxít-m-s* *iʔ* (**t*) *sqəłtmíx^w*
 FUT-help-(DIR)-2SG.ACC-3SG.ERG DET (*OBL) man
 The man will help you.

- (25) a. *kn* *wikəm* *t* *sqəłtmíx^w* (*iʔ*) *t*
 1SG.ABS see-MID OBL man DET OBL
ks-knxít-m-s.
 FUT-help-(DIR)-2SG.OBJ-3SG.ERG
 I saw a man who will help you.

- b. *wík-ən* *iʔ* *sqəłtmíx^w* *iʔ* (*t*)
 see-(DIR)-1SG.ERG DET man DET OBL
ks-knxít-m-s.
 FUT-help-(DIR)-2SG.ACC-1SG.ERG
 I saw the man that will help you.

At this point, it is worthwhile to briefly discuss the apparent ‘matching’ relation which holds between the head-introducing and clause-introducing particles in (25a) and (25b). Notice that for (25b), the oblique marker *t* is optional, while for (25a), it is the determiner *iʔ* that is optional. This difference appears to be due to the transitivity of the main clause predicate. Recall that in Okanagan, formally transitive predicates like *wíkən* ‘I see s.t.’ in (25b) will always select a full DP as an object, while formally intransitive predicates like *wikəm* ‘to see’ (25a) will always select for an oblique-marked KP as an object. This tight correlation between predicate transitivity and nominal marking drives the matching relation between the particle introducing the head noun and which particle *must* introduce the future-marked clausal remnant. The presence or absence of the optional particle in these cases seems to be a surface-level phenomena, there being no semantic difference between forms with and without the optional particle, and so it seems reasonable to assume that both particles are underlyingly present in these cases.²¹

²¹The fact that this ‘optional’ oblique marker *t* is only apparent in extractions from future-inflected predicates is interesting, especially since what I analyze as the equivalent particle in *Nxaʔamxcín* is not dependent on the tense/aspect properties of the clausal remnant. It is quite possible that this *t* has been borrowed by the Upper Nicola dialect from *Nłəʔkepmxcín*, and that it occurs only before future *ks-* on analogy with the *Nłəʔkepmxcín* *tk* and *Secwepemctsin* *tek* ‘oblique+irrealis determiner’. In both *Nłəʔkepmxcín* and *Secwepemctsin*, this sequence occurs before ‘unrealized’ or ‘irrealis’ intransitive objects, and in *Nłəʔkepmxcín* at least, also before relative clause predicates with unrealized/irrealis heads. If this hypothesis is correct, the prediction is that this *t* will be absent from other Okanagan dialects not so heavily influenced by *Nłəʔkepmxcín*.

This point also brings to mind the historical connection between the irrealis *k*-type determiners of the Northern Interior, and future *ks-* in Okanagan, and raises the question of whether the historical developments discussed in this paper might not be related to the absence of a *k* determiner in Okanagan,

But here we encounter a problem. Neither (25a) nor (25b) are consistent with the movement account, since in neither case does the sequence *iʔ t* code the relation of the gap to the clausal remnant. In other words, under the movement analysis, the prediction is that for both (25a) and (25b), *iʔ* must introduce the clausal remnant and *t* should be ungrammatical, since these are not instrument or passive agent extractions. If the oblique marker *t* did not undergo raising with a constituent clause-internal DP in these cases, then what is the function of *t* here, and where did it come from?

To begin to answer this question, it is important to note that Okanagan does show evidence that in certain cases, the oblique marker *cannot* have moved as a constituent with a post-clausal DP. Examples (26a,b) below are the structural equivalents to examples (25a,b) above, the difference being that the pronominal object of the clausal remnant is realized as a pro-clitic, rather than a suffix. In these cases, *t* occurs *between* the object clitic and the remnant predicate.²²

- (26) a. kn ks-ʔaʔʔaʔ-míxaʔx t tətʔwít₂ [[iʔ] [Ø_{NP₂}]_{DP₁}]
 1SG.ABS FUT-look.for-INCEPT OBL boy (DET)
 kʷu t ks-knxít-s t₁ ʔaʔ ʔlap_{CP}.
 1SG.GEN OBL FUT-help-(DIR)-3SG.ERG COMP tomorrow
 I'm gonna look for a boy to help me tomorrow.
- b. ʔaws-ʔaʔʔaʔ-nt-ín iʔ tətʔwít₂ [[iʔ] [Ø_{NP₂}]_{DP₁}] kʷu
 go-look.for-DIR-1SG.ERG DET boy DET 1SG.GEN
 (t) ks-knxít-s t₁ ʔaʔ ʔlap_{CP}.
 (OBL) FUT-help-(DIR)-3SG.ERG COMP tomorrow
 I went looking and I found the boy who's gonna help me tomorrow.

Since the 1st person object clitic *kʷu* in (26a,b) is certainly not a constituent with the moved DP, it can safely be concluded that the oblique marker *t*, which follows the clitic in this case, is also not a constituent with the moved DP, ergo it does not undergo movement. Concerning the position of *kʷu*, I assume a morpho-phonological analysis of pronominal pro-clitics, whereby they attach to the left-most element of a clause. Since *t* does not move in (26a,b), but rather delimits the left-periphery of the clause, a pronominal pro-clitic will attach to the left of *t*.²³

or its probable reanalysis as an aspectual prefix.

²²See A. Mattina (1993) for a discussion of Okanagan pronominal paradigms.

²³This predicts that a DP object, whose position is *not* morpho-phonologically determined, but syntactically determined, may not substitute for the object proclitic in such cases. While overt clause-internal nominal DP objects of subject-extracted relatives must occur after the clausal remnant, I have not yet tried to substitute an object DP for the proclitic in the cases shown above.

Note that pronominal pro-clitics also apparently attach to *t* in cleft contexts (27a), and regularly precede the complementizer *ʔaʔ* in contexts involving clausal subordination (27b):

- (27) a. anwíʔ k^w t sqəltmíx^w iʔ k^w ylmíx^wəm.
 2SG.INDEP 2SG.ABS OBL man DET 2SG.ABS chief
 ‘You’re the man who is the chief.’
- b. cak^w ʔast k^w ʔaʔ kaʔkíc-əm t siwʔk^w.
 DEON good 2SG.ABS COMP find-MID OBL water
 ‘It’d be good if you go find some water.’

The implication from data like (26) is that when oblique *t* precedes a relative clause, it does not necessarily code the relation of the gap to the clausal remnant, since it does not necessarily undergo movement. In other words, when a sequence *iʔ t* precedes a relative clause, *t* is either a case marker which moves as a constituent with a clause-internal DP (i.e. in instrument and passive agent extractions), or *t* is something else (i.e. in argument extractions from future-marked predicates). There is a syntactic difference between these two different types of oblique marking.

I claim that the *t* found in data like (23), (25), and (26) is a remnant of an earlier relativization strategy in Okanagan, whereby *t* introduced all relative clauses. This claim is supported from data in neighboring Salish languages. Consider that in the Northern Interior Salish languages of Ntəʔkepmxcín (Koch, 2006) and Secwepemcstín (Gardiner, 1993), non-locative clausal remnants are introduced by the oblique marker *t(e)*, regardless of the grammatical status of the moved constituent. The Southern Interior language Nxaʔamxcín also exhibits data showing that its oblique marker *t* cannot have moved together with a clause-internal DP. For these languages, as with Okanagan, only specific grammatical roles may be marked as oblique, and so assuming that all Interior Salish languages form relative clauses by a movement of a clause-internal DP to the left periphery of the clause, the relatively unrestricted occurrence of the oblique marker before relative clauses in these languages may be construed as evidence that it does not necessarily move with the clause-internal DP. In addition, an interesting and relevant difference emerges between Northern and Southern Interior Salish languages with regards to the linear position of the oblique marker in these cases, which in turn affects the mechanics of the movement analysis. It is to these languages that I now turn.

4.2 Evidence from Northern Interior Salish: Nłəʔkepmxcín and Secwepemctsín

For Nłəʔkepmxcín, spoken to the north and west of Okanagan country, oblique markers nearly always introduce relative clauses.^{24,25} Similar to the facts in Okanagan, Nłəʔkepmxcín oblique *t* introduces intransitive objects and ditransitive themes, and not transitive objects in main clause contexts. It does occur before relative clauses, however, even in cases where a transitive object has been extracted (28a).

- (28) a. (w)ʔéx xeʔ cu-t-ʔ-éne e zéwtn **t-e**
 PROG DEM fix-TR-3SG.OBJ-1SG.ERG DET cup OBL-DET
 máʔt-st-ʔ-ne.
 break-IM-CAUS-3SG.OBJ-1SG.ERG
 I am fixing the cup that I broke. (Koch, 2006, 141)
- b. ... e heʔuseʔ **t-k** xwuy' n-s-ʔaʔʔans.
 ... DET egg OBL-IRR FUT 1SG.POSS-NOM-eat(INTRANS)
 (I boiled) an egg that I'm going to eat. (Koch, p.c.)

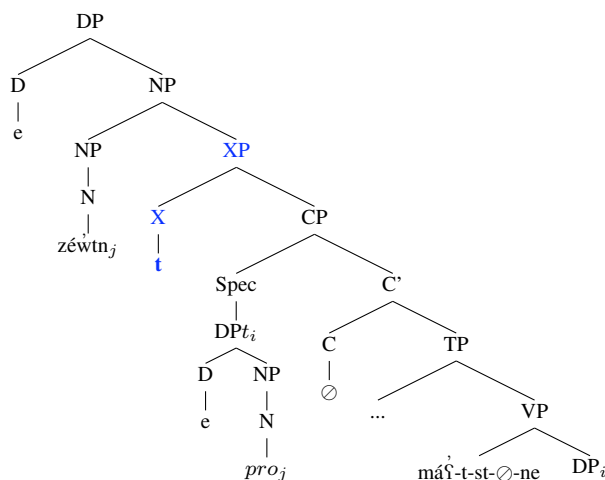
Since the relative clause predicates *máʔtstne* “I broke x” in (28a) is formally transitive, the oblique preposition *t* cannot have raised with the determiner *e* from a clause-internal position.²⁶ As Koch (2006, 133) notes, “there must be some higher position, possibly an adjunct to CP, containing the oblique marker *t*”, which he labels XP. This relevant structure is represented by (29):

²⁴Exceptions are as follows: (i) before the remote determiner *t* where *t* phonologically reduces (Kroeger, 1997; Koch, 2006); (ii) in the case of locative relatives, where a preposition introduces the clause; and (iii) in the case of headless relative clauses (Koch, 2006, fn5). Interestingly, *t* does surface before headless relatives in Nxaʔamxcín and Okanagan.

²⁵The oblique marker *t* in Nłəʔkepmxcín is segmentable from the ‘specific’ and ‘unrealized’ determiners *e* and *k*. In keeping them together, I follow the convention of Thompson and Thompson (1992), who analyze *t* and *k* as a “single descriptive marker” (p.153), for example.

²⁶The present determiner (*h*)*e* coalesces with the oblique marker *t* after movement, to form *te*. The intransitive predicate *ʔaʔʔans* “eat” in (28b) will take an oblique marked object in main clause contexts, including optionally the irrealis determiner *k* (Koch, p.c.), and so it is possible to analyze *tk* in (28) as introducing a PP which has raised from a post-clausal position, on analogy with Nłəʔkepmxcín (13) and Okanagan passive agent and instrument extractions. In other words, *t* in (28b) carries nominal case information, and has coalesced with the *t* which normally introduces relative clauses in Nłəʔkepmxcín.

(29)



The categorial identity of XP is not immediately important for our purposes, but the existence of an intermediate projection is important.²⁷

Similar to Ntəʔkepmxcín, headed relative clauses in Secwepemctsin (a.k.a. Shuswap) are introduced by the oblique case marker *tə* (Gardiner, 1993, 67). (30a) shows a subject extraction, and (30b) an object extraction:

- (30) a. č-lx̌-m-st-étɲ ʏ sqélmx^w tə
CUST-know-UNSP-CAUS-1SG.ERG DET man OBL
wik-t-x.
see-TR-2SG.ERG
I know the man you saw. (Gardiner, 1993, 67, ex. 166)
- b. pnhé?n k-wik-t-x-wəs ʏ sqélmx^w tə
when IRR-see-TR-2SG.ERG-3SG.DEP DET man OBL
cúmqs-n-s ʏ Mary.
kiss-TR-3SG.ERG DET Mary
When did you see the man that kissed Mary? (Gardiner, 1993, 162)

In both cases, the nominal *sqéłmcw* ‘man’ is underlyingly a direct argument of a transitive relative clause. Assuming that Secwepemctsín relatives are derived by movement, the prediction is that the clausal remnant should be introduced by one of the three ‘direct case’ determiners: proximal *y*, distal *l*, or irrealis *k*.²⁸ The

²⁷Koch (p.c.) is currently investigating the hypothesis that XP is a focus projection, i.e. FocP.

²⁸See Gardiner (1993, 24) for a discussion of the Secwepemctsin determiner system. It seems unlikely that the oblique marker *tə* which introduces relatives in Secwepemctsin consists of *t* plus a coalesced determiner (which is the case for Nl̓ap̓mxcín), at least synchronically, given the phono-

fact that this prediction is *not* upheld means one of two things: (i) In contrast to the other two Northern Interior Salish languages, Secwepemctsin relative clauses are not formed by movement; or more likely (ii) the moved determiner elides after the oblique marker. The second hypothesis is supported by several points.

Firstly, Kroeber (1999, 339) presents data showing that Secwepemctsin locative extractions may involve ‘preposition fronting’, similarly to Ntəʔkepmxcín (13):²⁹

- (31) m-wík-t-s ʔ-ʔéne y s-c-ʔál-cn-s
 UNSP-see-TR-3SG.ERG OBL-here DET NOM-STAT-freeze-edge-3SG.POSS
 y cptúk^w n sx^wúynt w-s n séx^wm-əs
 DET hole in ice PROG-3SG.CONJCT at bathe-3SG.CONJCT
 y twwíwt.
 DET youth
 There they saw the frozen edges of the hole in the ice where the youth had
 bathed. (ShL T8.172)

Secondly, note that headless relative clauses *are* introduced by a proximal *y* or distal *l* determiner, and not the oblique marker *tə* (Gardiner, 1993):

- (32) č-lx-m-st-ét n l wik-t-x.
 CUST-know-UNSP-CAUS-1SG.ERG DET see-TR-2SG.ERG
 I know the one you saw./I know that you saw him. (Gardiner, 1993, 67)

The fact that headless relatives are introduced by determiners, and headed relatives by the oblique marker (or locative marker) might receive explanation under the following scenario: As in Okanagan, the particles which introduce a pre-posed or headless relative in Secwepemctsin must be consistent with the selectional restrictions of the main clause predicate. In (32) for example, the clause must be introduced by a determiner, since the entire relative clause head + clausal modifier constituent is a main clause transitive object argument.³⁰ If we assume that the moved determiner elides after the oblique marker in headed relatives, but that the oblique marker elides before the moved determiner in headless relatives (because

logical shape of Secwepemctsin determiners.

²⁹Kroeber states that for (31), “unfortunately, it is not clear whether it should be interpreted as a headed relative clause (modifying *cptúk^w [n sx^wúynt]* ‘hole [in the ice]’): if it is, then it would indicate that preposition fronting, or something like it, occurs in Secwepemctsin.” As an alternative, he explains that *n* “at” may code the adverbial relation of *séx^wm-əs* “he bathed” to the main clause predicate.

³⁰To clarify, this does not mean that the main-clause predicate *selects* the determiner in these cases, since the determiner has moved from a clause-internal position, but only that the determiner is *consistent* with the main-clause predicate’s selectional restrictions. This same requirement also holds for Okanagan, and explains why pre-posed relatives are marginal or ungrammatical in certain cases.

of the aforementioned consistency requirement), then we have a straightforward explanation for the data. Formally speaking, all relatives in Secwepemctsín are of category XP, as they are in Nłəʔkepmxcín, but the X position is null for headless relatives.³¹

My analysis predicts that either the oblique marker *or* determiner may introduce a clausal remnant, but not both. Indeed, the non-co-occurrence of these particles seems to be a general feature of the Secwepemctsín grammar, since locative adjuncts, for example, are introduced only by prepositions, and never with a co-occurring determiner (Gardiner, p.c.). Note that under this analysis, there is no principled reason why a headed relative might not be introduced by a determiner, as occurs in Okanagan. Data from Kuipers (1974) and Kroeber (1999) suggest that this pattern is indeed possible (33):³²

- (33) a. yʔéne ʔəʔéʔ t qlmúxʷ ... ʔ ʔxʷ-nt-es ʔ
 that powerful ATT person ... DET beat-TR-3SG.ERG DET
 ʔyúm t kʷúkʷpý.
 big ATT chief
 the clever (powerful) Indian ... who had won against the great chief.
 (ShL T7.85),(Kroeber, 1999, 301)
- b. ʔeʔ wʔéx nyíʔ ʔ cncénəmn ʔ cwcéwʔməs t sqléwʔ.
 CONJ AUX DEM DET Chinese DET panning OBL gold
 And there were Chinese there, who were panning for gold.
 (Kuipers, 1974, 103)

It may therefore be the case that it is only a strong preference, not a requirement, that the moved determiner (rather than the oblique marker) elide in the case of a headed relative. This means that in Secwepemctsín, similar to Nłəʔkepmxcín and Okanagan, both particles are underlyingly present, but that a co-occurrence restriction in Secwepemctsín prevents both from surfacing simultaneously.

Clearly, more work is needed on relativization in Secwepemctsín, but for the present purposes, it is important simply to take note of two facts: (i) that oblique *t* introduces headed relatives, regardless of the grammatical status of the relativized

³¹It is also possible that the determiner *l* in (32) does not have its source from within the relative clause, but rather introduces the containing DP, whose head happens to be null. This derivation is somewhat more complex, and results in an intermediate stage ordering of DET-OBL, which is unattested in the Northern Interior. In any case, a determiner test similar to that used in Koch (2006) may help to clarify the issue.

³²Gardiner (p.c.) suggests that a direct determiner introduces the clause in (33b) because this is an example of a headless relative clause, but it is currently unclear to me why *cncénəmn* cannot be analyzed as the overt head.

constituent; and (ii) locative extractions are consistent with a movement analysis.

In sum, data show that Northern Interior Salish relatives may be introduced by *t*, crucially in cases where *t* does not code the relation of the gap to the clausal remnant. I now turn to the Southern Interior, and examine data from Nxaʔamxcín.

4.3 Evidence from Southern Interior Salish: Nxaʔamxcín

Nxaʔamxcín (a.k.a. Moses-Columbian), a sister language to Okanagan, is similar to the Northern Interior languages just discussed, in that an oblique marker *t* introduces relative clauses, as shown in (34a). Pre-nominal relatives are also introduced by *t* in Nxaʔamxcín (34b), as are headless relatives (34c).³³ Unlike in Secwepemctsin, there is no co-occurrence restriction preventing a determiner and oblique marker from both introducing a relative clause in Nxaʔamxcín (34b).

- (34) a. núxʷt ʔací sqəltmíxʷ t c-my-stú-n.
 go DET man OBL CUST-know-CAUS-1SG.ERG
 The man that I knew left. (Willett, 2003, 97, ex. 62)
- b. wíktɬn ʔaní t ʔacmúxʷt smʔámm.
 see-TR-1SG.ERG DET OBL CUST-laugh woman
 I saw the woman who laughed. (Willett, 2003, 100, ex. 74)
- c. ʔacsúxʷsn ʔaní t kɬ-cəmusntxʷ.
 CUST-know-CAUS-1SG.ERG DET OBL kiss-DIR-3SG.ERG
 I know the one that you kissed. (Willett, 2003, 101, ex. 77)

The ‘general’ article *ʔaní* is used to introduce direct arguments of transitive predicates in Nxaʔamxcín (Willett, 2003, 84),³⁴ while the oblique marker *t*, just as in Okanagan, is used to introduce non-direct arguments, for example intransitive objects, ditransitive themes, and ergative arguments (Willett, 2003, 87). The fact that *t* surfaces before a transitive relative clause like (34), where the object has

³³Oblique marking of ergatives in Nxaʔamxcín is not limited to passive agents (Willett, 2003, 88), but from examples I have been able to find, the sequence *ʔaní t* found in (34b) occurs only before relative clauses. This suggests that the oblique marker in (34b) is associated with the clausal remnant, and not the moved DP.

³⁴Or one of three ‘deictic’ determiners, *ʔaxáʔ* ‘proximal’, *ʔací* ‘non-proximal’, and *ʔaʔúʔ* ‘distal’. Note their phonological resemblance to demonstratives in Okanagan. The Nxaʔamxcín data support Kroeber’s hypothesis concerning the source of DP-internal prepositions in the Southern Interior, if we assume that the Okanagan determiner *iʔ* was once a bi-syllabic demonstrative-like determiner, similar to Nxaʔamxcín *ʔaní*, but later underwent truncation, which did not occur in Nxaʔamxcín. *ʔaní* may in fact be the only true determiner in Nxaʔamxcín, since data in Mattina (2006) show that it, unlike the other determiners, cannot function as a predicate.

been extracted, is not consistent with an analysis where *t* has moved from a clause internal position. (34) therefore seems directly parallel to Secwepemctsin (30a) and Nl̓əʔkepmxcín (28a), and the initial hypothesis is thus that *t* in (34) is the head of an XP in a structure essentially equivalent to (29).

Locative relative clause data, however, show that (29) is not a correct representation of relative clause formation in Nxaʔamxcín. (35) below show determiner-locative marker sequences introducing the clausal remnant, which is characteristic of locative adjunct extractions in Okanagan (cf 18), except that an additional *t* occurs on the *inside* of the moved DP.³⁵

- (35) a. q^wtúnt ʔaní xʔut₂ [[ʔaní lci [Ø_{NP₂}]_{DP₁}] **t**
 big-STAT DET rock DET in.there OBL
 kʔtúc¹ntn ʔinní¹kmn t_{1CP}.
 POS-put.down-DIR-1SG.ERG 1SG.POSS-knife
 The rock under which I laid the knife is big. (Willett, 2003, 99, ex.71)
- b. næst ʔaxá ʔaní pənpənáqs₂ [[ʔaní lci [Ø_{NP₂}]_{DP₁}]
 heavy-STAT DEM DET pənpənáqs DET in.there
t nalíxn ʔintəmtəmutn t_{1CP}.
 OBL POS-put.down-TR-1SG.ERG 1SG.POSS-clothing
 The pənpənáqs where I put my clothes is heavy. (Willett, 2003, 99, ex.70)

It is important to note that sequences of determiner-locative-oblique are only possible in extraction contexts in Nxaʔamxcín, which means that *t* cannot have moved with the locative DP. Together with Okanagan (26) above, (35) constitutes strong evidence that oblique-marked relative clauses in the Southern Interior, just as in the Northern Interior, do not necessarily involve movement of an oblique marker.

Southern Interior Salish languages are thus similar to their Northern Interior

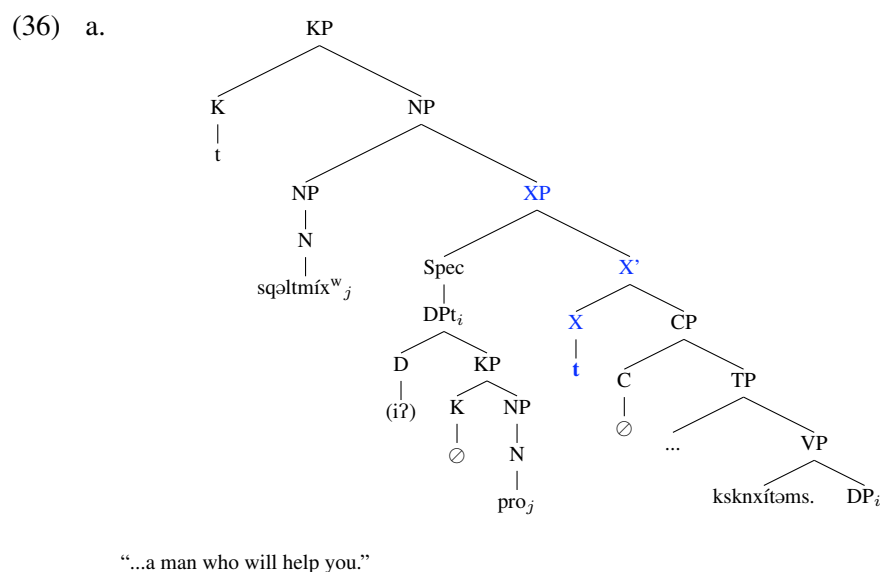
³⁵The locative morpheme *lci* is segmentally, and semantically, more complex than what I analyze as locative K heads in Okanagan. Moses also has the simpler locative ‘prepositions’ found in Okanagan, for example *l*. I currently lack data showing a locative relevant clause introduced by ʔaní *l*, although I predict that these should be possible, since ʔaní *l* introduces nominal adjunct in main-clause ‘prepositional-phrase’-like contexts. Locative *lci* resembles more closely the Okanagan demonstrative adverbial *ilíʔ* ‘there’, but must be analyzed differently, since demonstratives in Okanagan do not occur internal to DP, but adjoin to the exterior. I label *lci* as a Loc head, rather than a K head, for this reason.

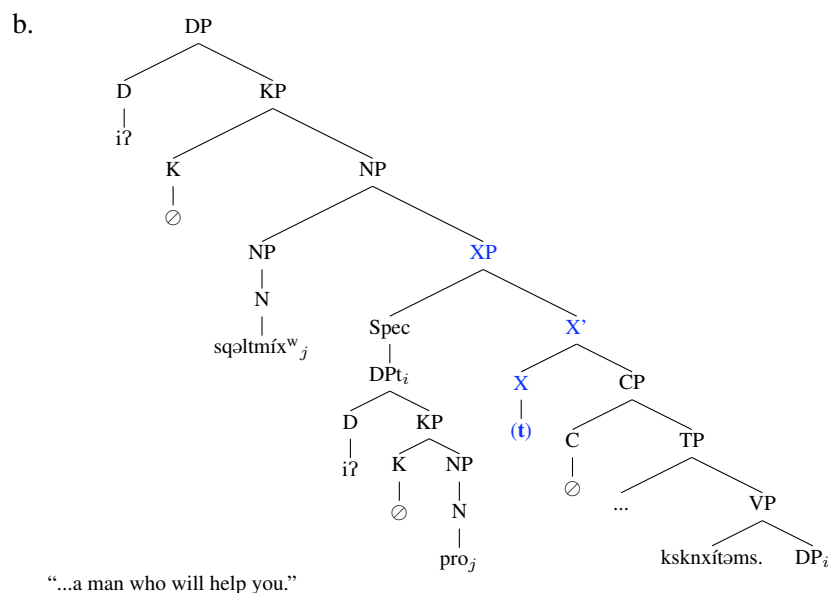
It is possible that *lci* is a clause-initial locative adverb, and has not moved with the determiner, which in turn means that *t* does not mark the left-periphery in these cases but is situated further inside the clause. A further structural revision will be necessary if this is true. It nevertheless seems reasonable to tentatively assume that since *lci* codes the relation of ‘the rock’ to the relative clause predicate in (35a), that it may also have undergone movement with the determiner.

counterparts with respect to relative clause formation, but with one important difference: the oblique marker which introduces the relative clause surfaces *before* the moved constituent in the Northern Interior, but *after* the moved constituent in the Southern Interior. This difference implies a structural distinction with regards to relative clause formation. I now turn to an analysis of this difference.

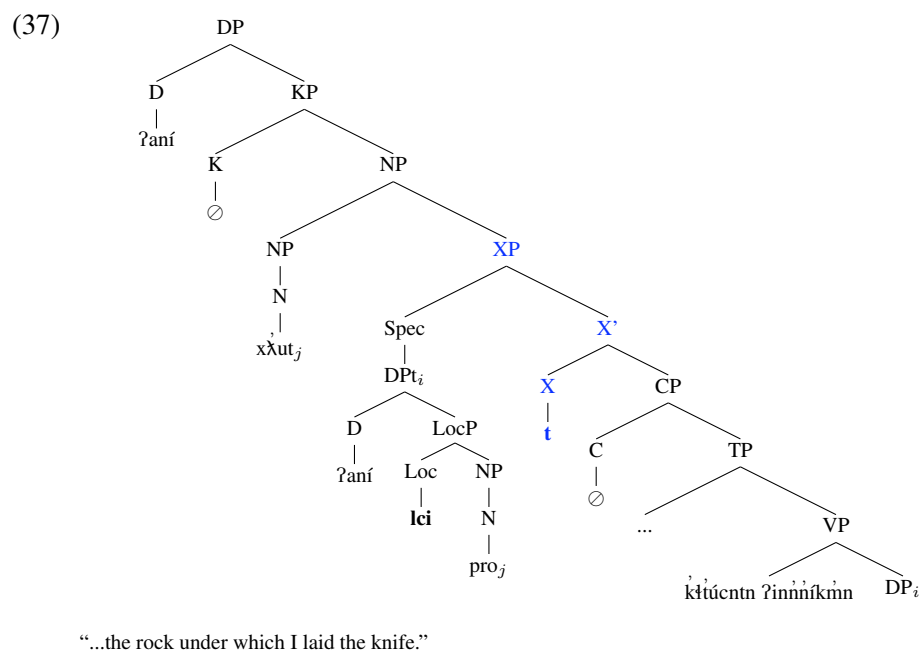
5 Analysis

I propose that in both Northern and Southern Interior languages, the left-periphery of a relative clause is defined by XP, rather than CP, as implied by Koch (2006). The difference is that in the Northern Interior languages, a clause-internal DP moves to the specifier position of CP (cf 29) while in Southern Interior languages, a clause-internal DP moves to the specifier position of XP. Okanagan (36a,b) represents data given earlier as (25a,b).



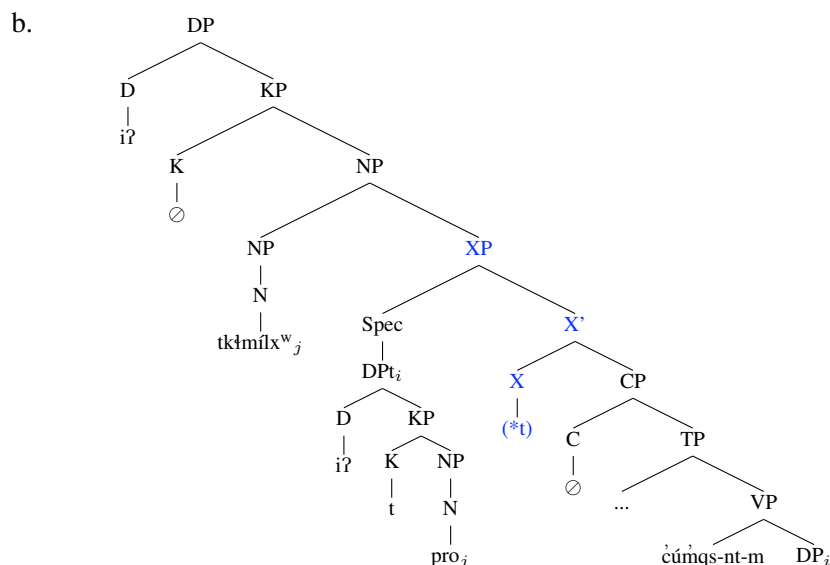


This higher landing site (Spec XP) derives the correct ordering between the initial moved determiner and the following relative clause oblique marker, which is the pattern characteristic in the Southern Interior. This structure will also correctly derive locative relative clauses in Okanagan, as well as Nxaʔamxcín (37):



This analysis predicts that determiner-locative-oblique sequences should be possible in Okanagan, just as in Nxaʔamxcín (37). This is so far unattested in Okanagan, and may be due to a co-occurrence restriction on sequences of case-marking locative and/or oblique markers. In other words, a double case-marker filter³⁶ in Okanagan prevents a sequence of two oblique markers in instrumental and passive agent extractions (38), and a locative-oblique marker sequence in locative adjunct extractions.³⁷

- (38) a. Mike wiks iʔ tkʔmɪlx^w₂ [[iʔ t [Ø_{NP2}]_{DP1}]
 Mike see-(DIR)-3SG.ERG DET woman DET OBL
 (*t) cúmq̣s-nt-m t_{1XP}].
 (*OBL) kiss-DIR-PASS
 Mike saw the woman he was kissed by.

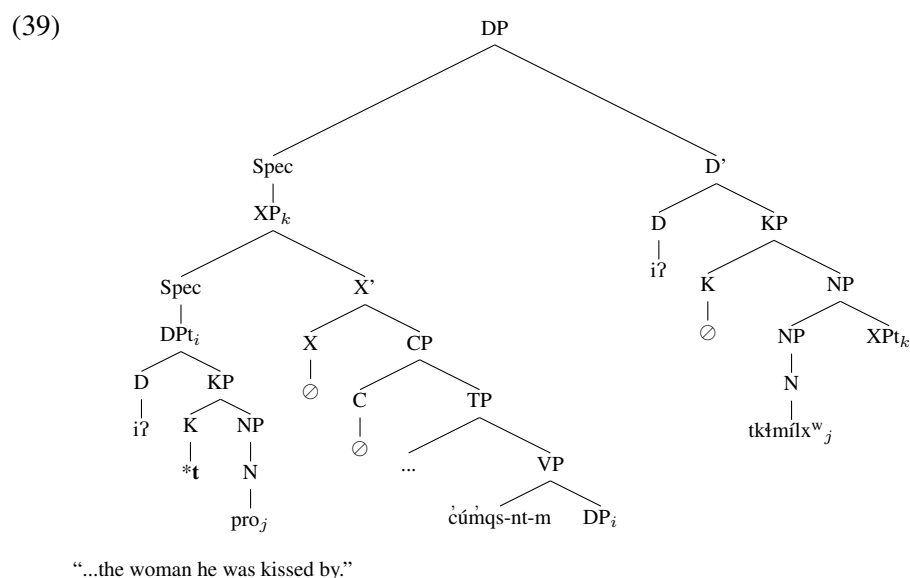


This analysis has the advantage of explaining the overwhelming preference in Okanagan for post-nominal relative clauses, as opposed to their pre-posed equivalents. Although pre-posed relatives are in certain cases possible in Okanagan (cf

³⁶Similar in spirit to the Double Determiner Filter advocated by Davis (2010) for St'át'imcets relative clauses. The double case-marker filter presumably applies only to two sequences of oblique markers in Nxaʔamxcín, while Okanagan has extended the filter to include sequences of any two case markers.

³⁷Although if my morpho-phonological analysis of (26) is correct, and proclitics attach to the leftmost element in XP (in this case *t*), the prediction is that determiner-locative-proclitic-oblique sequences should be possible, since the double-case-marker filter would not apply in these cases.

21b), these are generally marked since the particles which introduce the pre-posed clausal remnant must *also* match the selectional restrictions of the main clause predicate.³⁸ To illustrate, consider again (38). The relative clause *iʔ t cúmq̣s-nt-m* ‘who he was kissed by’ cannot be preposed over the head-containing DP *iʔ tk̑m̑lx^w* ‘the woman’ because the sequence *iʔ t* cannot introduce an object of a sentence-initial main-clause transitive predicate like *wiks* ‘He saw x’. In other words, it is necessary for the case marker *t* to delete in order for the entire relative clause + head constituent to be construed as the DP object argument of the main predicate,³⁹ but then the relation between the gap and the relative clause is obscured. The following structure is therefore ungrammatical:

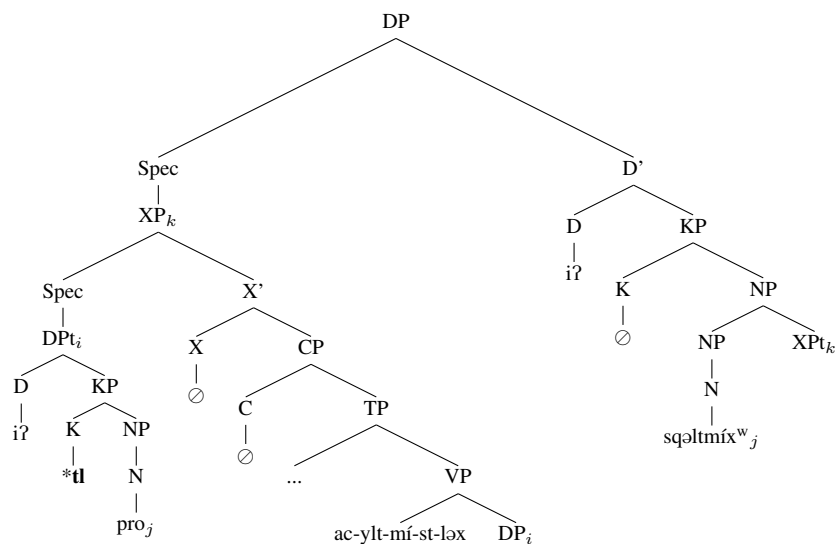


The same reasoning explains why pre-posed locative relatives are ungrammatical in Okanagan. For an example like (18a, 40), the entire relative clause + head constituent can only be construed as an object argument of the main clause predicate if the constituent is introduced by *iʔ*. This requires that the locative case marker *tl* delete, but then this obscures the relation between the gap and the relative clause, as well as resulting in the loss of valuable deictic information. (40) is therefore ungrammatical, while the post-nominal equivalent is acceptable.

³⁸See above my hypothesis for why headed relatives in Secwepemctsin are introduced by oblique markers, and headless relatives are introduced by determiners.

³⁹The requirement that the particle(s) which introduce a head + clausal modifier (or clausal modifier + head) clearly reflect the relationship between the constituent as a whole and the main clause predicate is also active in Secwepemctsin, and explains why headless relatives like (32) are introduced by a determiner rather than an oblique marker.

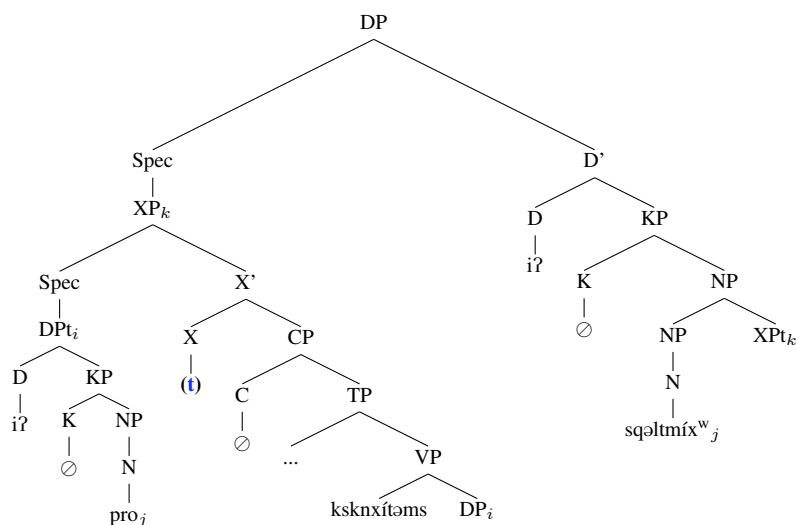
(40)



"...the man they were running away from."

Interestingly, the pre-posed equivalents of Okanagan (25a,b) *are* acceptable:

(41)



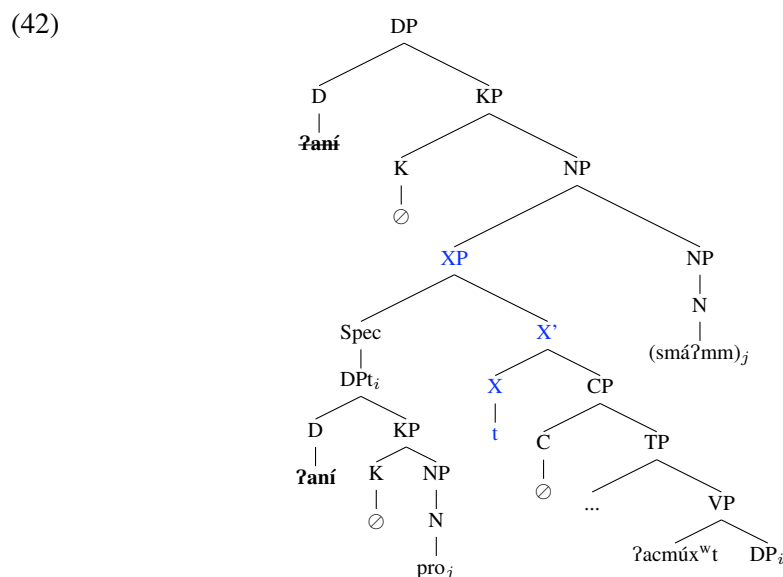
"...the man who will help you."

Because *t* in these cases does not code the relation between the gap and the clausal remnant (i.e. it does not move as a constituent with the clause-internal DP), but only serves to 'optionally' introduce the relative clause, it may easily elide in order for the entire clausal remnant + head DP constituent to be construed as an argument

of the main predicate. (41) is therefore acceptable.

In sum, Okanagan, like Nłəʔkepmxcín, Secwepemctsin, and Nxaʔamxcín, uses *t* to introduce relatives, and this use of *t* is independent of *t* as a case marker, which codes the relation between the gap and the clausal remnant.⁴⁰

Like St'át'imcets (Davis, 2010), Nxaʔamxcín allows pre-nominal relatives, like example (34b) above. These can be derived from a canonical post-nominal structure by simply inverting the order of the NP and the adjoined XP modifier, as shown in (42).



“...the woman/one who laughed.” (Willett, 2003, 100, ex. 74)

This implies that in Nxaʔamxcín, head-modifier ordering between NP and XP is in free variation. The NP-final variant will result in a sequence of two determiners, one of which will delete as a result of a Double Determiner Filter (Davis, 2010, 22).⁴¹

⁴⁰ As mentioned before, there are aspectual restrictions on where relative *t* can surface in Okanagan, which does not seem to be characteristic of any of the other languages surveyed here. Additionally, there is no clear ‘matching’ effect between nominal and head-introducing particles in any of the other languages, as there seems to be in Okanagan, but the prediction is that *if* Secwepemctsin allowed determiners and locative/oblique markers to co-occur, that a matching effect would also be evident.

⁴¹ Davis formulates this as consisting of two parts:

- (i) a. *Double Determiner Filter*
*[D₁...D₂] where no lexical head intervenes between D₁ and D₂
- b. *Determiner Deletion*
Delete one of two phonologically adjacent determiners.

Finally, this analysis offers an explanation of why in Nxaʔamxcín, the optional absolutive case-marker *wa* surfaces to the right of an associated absolutive argument in extraction contexts, but surfaces to the left of the absolutive argument in other contexts (Willett, 1996, 2003).

- (43) a. máʔ^w-s **wa** **nlx^wátk^wtn** smʔámm.
 break-(TR)-3SG.ERG ABS pot woman
 ‘The woman broke the pot.’ (Willett, 2003, 114, ex. 157)
- b. c-mi-stú-nn ʔaní **ttwít₂** [[**wa** [∅ [∅<sub>NP₂]]_{DP}]_{KP₁}]
 CUST-know-TR-1SG.ERG DET boy ABS DET
 t kʔcəmús-nt-s kiʔánaʔ t_{1XP}.
 OBL kiss-TR-3SG.ERG girl
 ‘I know the boy that the girl kissed.’ (Willett, 2003, 97, ex. 63)</sub>

In Nxaʔamxcín, determiners are regularly absent before argument nominals (Mattina, 2006), as shown in (43a). The categorical status of the moved constituent in (43b) is thus called into question. As opposed to the Nxaʔamxcín locative markers, *wa* is not a DP-internal K-head since it may apparently precede a determiner in main clause contexts. It introduces both simple absolutive DPs (44a), as well as headless relative clauses which are absolutive DP arguments of main-clause predicates (44b):⁴²

- (44) a. ʔac-yáy-əx^w **wa** [ʔaʔúʔ kkiʔaʔ-s_{DP}] t ʃaʃəpaʔ.
 ASP-weave-ASP ABS DET grandmother-3SG.POSS OBL bag
 ‘His grandmother is weaving a bag.’ (Mattina, 2006, 105, ex.14).
- b. ʔíca k^wa ʔacʔ-s **wa** [[ʔaʔúʔ [∅<sub>NP₂]]_{DP₁}] t
 then see-(TR)-3SG.ERG ABS DET OBL
 ʔac-x^wúwi t_{1XP}.
 ASP-fly
 ‘Then he saw the one flying.’ (Mattina, 2006, 125, ex.103).</sub>

As indicated by the bracketing in (43b), the examples in (44) show that *wa* is a DP-external case marker (Bittner and Hale, 1996), and implies that Nxaʔamxcín has two separate structural positions reserved for case-marking: one is DP-internal,

⁴² ‘His grandmother’ in (44a) is the subject argument of an intransitive predicate, hence the absolutive marking on the subject, and the oblique marking on the notional object. For (44b), it is unclear whether *wa* has moved with the clause internal DP (cf 43b) or indicates that the entire relative clause is an absolutive argument of the main-clause predicate. If the latter holds true, then the prediction is that a secondary *wa* should be grammatical before the DP ʔaní *ttwít* ‘the boy’ in (43b).

the other is DP-external. Clearly more work is needed on this interesting problem.

By way of summary, if we assume that the clause-internal moved constituent in the Southern Interior languages lands in a higher position than in the Northern Interior languages, then with an otherwise identical structure and a minimal amount of extra syntactic machinery, we are able to successfully account for a wide range of relative clauses in Southern Interior Salish, as well as account for the somewhat aberrant distribution of oblique marking in Okanagan. Although relative clause data from Coeur d'Alene and Kalispel are sparse, what may emerge is an interesting split between the Northern and Southern Interior sub-branches of the family with regards to relative clause formation.

6 The relation between DP-internal prepositions and relative clause formation in the Southern Interior

Southern Interior Salish languages all share the striking property of having DP-internal locative marking, rather than the prepositions found in Northern Interior languages.⁴³ In reconstructed Proto-Salish, prepositions also precede determiners,⁴⁴ and so the question arises as to what caused Southern Interior languages to change the linear ordering of the determiner and preposition.

Kroeber (1999) suggests that determiners in the Southern Interior were originally DP and PP-adjoined demonstratives, which underwent truncation and an accompanying loss of deictic force, thus becoming the determiners that we know today. In the context of a PP, for example, an adjoined demonstrative became a determiner, and the original PP-internal determiners presumably disappeared.⁴⁵

I suggest here two possible alternative accounts of how Southern Interior Salish came to have DP-internal locative and oblique marking. Both accounts rest on my analysis of relative clause formation, which I have outlined in this paper. Under the first account, which is not consistent with Kroeber (1999), a change in relative clause formation conditioned a linear inversion between case markers and determiners. Under the second account, which is consistent with Kroeber (1999), the historical process outlined in the preceding paragraph conditioned a change in relative clause formation.

⁴³Prepositions in Ntəʔkepmxcín and St'át'imcets precede a determiner, while prepositions in Secwepemctsín never co-occur with a determiner.

⁴⁴The PREP-DET ordering holds everywhere in the Salish family except the Southern Interior.

⁴⁵Nxaʔamxcín offers the strongest evidence for Kroeber's hypothesis. Both the determiners and demonstratives in this language have a CVCV shape, and so we can easily infer that perhaps Nxaʔamxcín determiners resisted the truncation which occurred with Okanagan determiners, for example (Mattina, 2006). Alternatively, Nxaʔamxcín may have completely lost its original determiners, and borrowed a set of demonstrative adverbs to replace them (Davis, p.c.).

6.1 Analysis 1: Change in Relative Clause formation Conditions Inversion

Consider an earlier stage of Okanagan, where relative clause formation occurred exactly as in Nłəʔkepmxcín, and the language exhibited DP-external prepositions:

(45) Stage 1: Equivalent to Nłəʔkepmxcín

- a. iʔ səx^wmaʔmáyaʔm-s₂ [t [[iʔ [Ø_{NP₂]}DP₁] knxít-t-m
 DET teacher-3SG.POSS OBL DET help-DIR-PASS
 t₁ t iʔ tətwt_{CP}]XP]
 OBL DET boy
 ...the teacher who was helped by the boy.
- b. iʔ səx^wmaʔmáyaʔm-s₂ [t [[(t) [iʔ [Ø_{NP₂]}DP₁]PP₁]
 DET teacher-3SG.POSS OBL (OBL) DET
 knxít-t-m t₁ l iʔ sənqəy^míntən.CP]XP]
 help-DIR-PASS LOC DET school
 ...the teacher that helped him at school.

Example (45a) includes an extracted passive patient, and example (45b) includes an extracted passive agent. (45a) additionally has a clause-internal prepositional phrase which is the oblique-marked clause-internal agent. (45b) has a clause internal locative prepositional phrase. Just as in Nłəʔkepmxcín today, Okanagan relatives were at one time always introduced by the oblique marker (head X), and a clause-internal DP (or PP) moved to the specifier position of CP. In (45b), which involves extraction of a passive agent, this resulted in a sequence of two oblique markers, only one of which was presumably realized.⁴⁶

At some point during the development of Southern Interior languages, an unknown event prompted a change in relative clause formation. The moved DP (46a) or PP (46b) now lands in the Specifier position of XP, rather than CP:

(46) Stage 2: Movement to Spec XP instead of Spec CP

- a. iʔ səx^wmaʔmáyaʔm-s₂ [[iʔ [Ø_{NP₂]}DP₁] t [knxít-t-m
 DET teacher-3SG.POSS DET OBL help-DIR-PASS
 t₁ t iʔ tətwt_{CP}]XP]
 OBL DET boy
 ...the teacher who was helped by the boy.

⁴⁶Note that an overt clause-internal oblique-marked agent is necessary in (45a) to confirm the status of the extracted constituent as a patient, since both patient and agent extractions introduce the clausal remnant by the same surface sequence of particles. It is possible that this ambiguity helped motivate an inversion between the determiner and case markers.

- b. $i\dot{?}$ $s\acute{x}^w\acute{m}a\dot{?}\acute{m}\acute{a}ya\dot{?}m-s_2$ $[[t$ $i\dot{?}$ $[\oslash_{NP_2}]_{DP_1}]_{PP_1}]$ $\dot{t}$
 DET teacher-3SG.POSS OBL DET OBL
 $[knx\acute{i}t-t-m$ t_1 $\mathbf{l}$ $i\dot{?}$ $s\acute{n}\acute{q}\acute{o}y\acute{m}\acute{i}nt\acute{o}n.CP]_{XP}$
 help-DIR-PASS LOC DET school
 ...the teacher that helped him at school.

As can be seen in (46) this change resulted in a discrepancy between the linear order of determiner and preposition found in non-extraction contexts on the one hand (PREP-DET), and in extraction contexts on the other hand (DET-PREP). This discrepancy motivated an inversion of determiner and preposition in non-extraction contexts, on analogy with the ordering found before relative clauses:

(47) **Stage 3:** Inversion of P to case marker, then loss of relative t

- a. $i\dot{?}$ $s\acute{x}^w\acute{m}a\dot{?}\acute{m}\acute{a}ya\dot{?}m-s_2$ $[[i\dot{?}$ $[\oslash_{NP_2}]_{DP_1}]$ $\dot{t}$ $[knx\acute{i}t-t-m$
 DET teacher-3SG.POSS DET OBL help-DIR-PASS
 t_1 $i\dot{?}$ $\dot{t}$ $t\acute{o}tw\acute{i}t_{CP}]_{XP}$
 DET OBL boy
 ...the teacher who was helped by the boy.
- b. $i\dot{?}$ $s\acute{x}^w\acute{m}a\dot{?}\acute{m}\acute{a}ya\dot{?}m-s_2$ $[[i\dot{?}$ $[t$ $[\oslash_{NP_2}]_{KP_1}]_{DP_1}]$ $\dot{t}$
 DET teacher-3SG.POSS DET OBL OBL
 $[knx\acute{i}t-(t)-m$ t_1 $i\dot{?}$ $\mathbf{l}$ $s\acute{n}\acute{q}\acute{o}y\acute{m}\acute{i}nt\acute{o}n.CP]_{XP}$
 help-DIR-PASS DET LOC school
 ...the teacher that helped him at school.

The oblique marker which always precedes relative clauses is then lost in cases of passive-patient extraction (47a), since it is now indistinguishable from a case-marker t which has become associated with agent-extraction. In agent-extractions (47b), relative t merged with the case-marker. Today, relative t only surfaces in Okanagan where it cannot be misconstrued as a case-marker: that is, optionally before future marked relatives.

6.2 Analysis 2: Loss of original determiners conditioned a change in relative clause formation

The second alternate analysis is consistent with Kroeber (1999). We begin again with an earlier stage of Okanagan essentially equivalent to $N\acute{\acute{o}}\acute{?}kepmxc\acute{i}n$ (45).

The original determiners were lost as DP and PP-adjoined demonstratives evolved into a new set of determiners (in red type), which occurred external to the original prepositions (Stage 2b):

(48) **Stage 2b:** Loss of original determiners and evolution of original demonstratives into a new set of determiners

- a. $i\text{?}$ $səx^wmaʔmáyaʔm-s_2$ [t [[$i\text{?}$ $i\text{?}$ [$\emptyset_{NP_2}$] $_{DP_1}$]
 DET teacher-3SG.POSS OBL DET $\emptyset_{\text{DET}}$
 $knxít-t-m$ t_1 $i\text{?}$ t $i\text{?}$ $tətwít_{CP}]_{XP}$
 help-DIR-PASS DET OBL $\emptyset_{\text{DET}}$ boy
 ...the teacher who was helped by the boy.
- b. $i\text{?}$ $səx^wmaʔmáyaʔm-s_2$ [t [[$i\text{?}$ [t [$i\text{?}$ [$\emptyset_{NP_2}$]] $_{PP_1}$] $_{DP_1}$]
 DET teacher-3SG.POSS OBL DET OBL $\emptyset_{\text{DET}}$
 $knxít-t-m$ t_1 $i\text{?}$ l $i\text{?}$ $sənqəy'míntən.CP]_{XP}$
 help-DIR-PASS DET LOC $\emptyset_{\text{DET}}$ school
 ...the teacher that helped him at school.

During the final stage 3, movement of a clause-internal DP or PP was shifted to a higher position, in order to level the discrepancy between the linear order of determiner and preposition found in non-extraction contexts (DET-PREP), and that found in extraction contexts (PREP-DET). This stage is represented above as (47).

6.3 Weighing the two analyses

The two analyses sketched above differ in the following way: For Analysis 1, the syntax is driving the morphology, while for Analysis 2, the morphology is driving the syntax. Kroeber's hypothesis concerning the origin of the DP-internal locative markers found in the Southern Interior is grounded in typological fact: cross-linguistically, determiners often have their origins in demonstratives (Greenberg, 1978). Furthermore, I have no answer for what factor could possibly motivate the change in relative clause formation proffered by Analysis 1, if *not* the loss of the original determiners, following Kroeber's hypothesis. Although it is possible that there is a precedent for such a change in other languages, I do not know of any. Analysis 2 seems preferable for these reasons.

There is at least one piece of evidence that seems to support Analysis 1 over Analysis 2, however, if for no other reason than it either calls into question Kroeber's hypothesis, or introduces new questions concerning the time depth and ordering of the necessary changes. The Secwepemctsín determiner $y(\emptyset)$ is probably cognate with the Okanagan determiner $i\text{?}$ (Davis, p.c.). Secwepemctsín and Okanagan belong to different sub-branches of the Salish family, which suggests a considerable time depth, but while Okanagan has DP-internal locative markers, Secwepemctsín exhibits the remnant of the proto-Salish prepositional system. Although determiners and prepositions/locative markers do not co-occur sequentially

in Secwepemctsín (Gardiner, p.c.), it does have an oblique-irrealis ‘article’, *tək*, which is used to mark non-specific nominals (Gardiner, 1993, 26):

- (49) a. kúl-m tə məxéxyəʔ.
 make-MID OBL basket
 She made a basket.
- b. məʔ kúl-m əkʷə tək məxéxyəʔ.
 EXP make-MID REP OBL.IRR basket
 She’s going to make a basket. (Gardiner, 1993, 26)

tək is cognate with the Nl̓əʔkepmxcín oblique-irrealis determiner complex *tk* found before relative clauses (cf 28b). Furthermore, Gibson (1973) analyzes Secwepemctsín *tək* as consisting of the oblique marker *tə* plus the irrealis determiner *k*. Diachronically at least, this certainly seems to be the case, which means that Secwepemctsín did exhibit the proto-Salish PREP-DET ordering at one point during its history, thus placing it in line with the other Northern Interior languages. Assuming cognacy between Okanagan *iʔ* and Secwepemctsín proximal determiner *yə*, and that *yə* occurs in the same syntactic position as the irrealis determiner *k*, we might infer that a proximal oblique in Secwepemctsín was once introduced by **tə yə*, and a locative oblique by **nə yə*, for example. But if both Okanagan and Secwepemctsín determiners have evolved from DP/PP-adjoined demonstratives, then we must conclude that for Secwepemctsín, an additional set of *locative particles* evolved outside of the new DP domain, and the original locative markers were lost along with the original determiners. This would effectively mean that Secwepemctsín was once like Okanagan is today, with DP-internal locative marking, but there is no evidence that Northern Interior languages ever had such structures.

And so depending on the strength of the cognate relation between Okanagan *iʔ* and Secwepemctsín *yə*, Analysis 1 may actually garner some support.

7 Further Questions

There are many questions which remain, but I will endeavor to address a few of the most salient here.

First of all, if Kroeber’s hypothesis is incorrect, then we still have an explanation for why Southern Interior Salish languages have DP-internal locative marking (Analysis 1), but suddenly have no explanation for what may have conditioned a change in the way relative clauses are formed. I do not have anything illuminating to say on this issue at the moment, but it may be an avenue worth exploring.

Second, what is the categorical status of “XP” in Salish, and what syntactic generalizations could follow from assigning X one category label in lieu of another? For the Southern Interior at least, it is possible to analyze X as C; in other words, the oblique marker which introduces relative clauses may be a kind of complementizer. I refrain from making this claim because for Okanagan at least, in contexts involving non-relative clausal subordination, *t* is not found; i.e. it is not used as a complementizer. It is possible that it is assigning oblique status to the CP as a whole, but it is unclear what new generalizations may emerge from this analysis. It is also possible that its categorical status differs within the Southern Interior, since in Okanagan but apparently not in Nxaʔamxcín, relative *t* is only grammatical before predicates inflected with irrealis *ks-*. I have noted in passing that this could be happening on analogy with Ntəʔkepmxcín *tk*, but there is in any case ample historical evidence to posit a separate syntactic position for *t*.

Thirdly, the nature of the ‘matching’ relation between the particles which introduce the relative clause head, and the particles which introduce the clausal remnant, remains obscure for Okanagan. Secwepemctsín relatives also display evidence for such a matching relation, although the relation is partially obscured by the absence of co-occurring determiners and oblique markers.

Finally, extraction data is glaringly scarce on Coeur d’Alene and Kalispel, which makes it difficult to say for sure whether my analysis of Okanagan and Nxaʔamxcín relatives can truly be extended to the Southern Interior as a whole. But it is nevertheless suggestive that both languages have DP-internal locative markers:

(50) Coeur d’Alene (Doak, 1997, ex. 373b, 375)

- a. čn dɛx^w-t x^wɛ tɛl̥ t̥pu̯p̥u̯ɲ̥n.
 1SG.NOM drop-RES DET FROM car
 I fell out of the car.
- b. x^wɛ hnkəsin naq̣^wc x^wɛ st̥šá x^wɛ
 DET 1SG.POSS-cousin steal-DIR-3SG.ERG DET huckleberry DET
 tɛl̥ Annie čremqn.
 FROM Annie Cheremkin
 My cousin stole the berries from Annie Cheremkin.

(51) Spokane (Carlson, 1972, 55); Kalispel (Kroeber, 1999, 62)

- a. k^wéys ʔuʔ ʃ^wəl̥ ʔa:pəmis
 take-(DIR)-3SG.ERG DET LOC arrow-3SG.POSS
 He took it for his arrow.

- b. k^wém̓t sx^wǰéʔi ʔuʔ l ʔéyeʔ esəmóq^w.
 then mountain.goat DET LOC bad mountain
 (Then) the mountain goat is in the bad mountain (KL T9.44)

Kalispel, at least, also shows evidence that locative relatives are formed by movement:

- (52) x^wuy ʔaq^w-m-úleʔx^w ʔuʔ l es-tix^w-i t
 go come.into.open.space DET LOC CONT-obtain-CONT OBL
 s-ǰ^weʔlí.
 camas.in.ground
 He came to an open field where people were gathering camas.
 (Vogt, 1940), (Camp, 2007, 28)

Further work is needed on relativization in these languages before anything conclusive can be said with regards to the role of oblique marking in relative clauses.

8 Conclusions

I have claimed that Okanagan and Nxaʔamxcín show evidence that their relative clauses are formed by movement of a clause-internal DP to the left-periphery of the relative clause. Southern Interior languages thus form their relative clauses in a manner analagous to Northern Interior languages, but not identically. Otherwise anomalous oblique marked relative clauses in Okanagan, and a more general pattern of relativization in Nxaʔamxcín, together show that the moved constituent lands in a structurally higher position in these languages, than in the Northern Interior languages. Besides representing an interesting typological and syntactic split between two branches of the Salish family, I have suggested that this difference might also explain the DP-internal locative markers characteristic of Southern Interior languages.

Abbreviations

ABS	absolutive	GEN	genitive object
APPL	transitive applicative	IMPF	imperfective
ATT	attributive	INCEPT	inceptive
AUX	auxiliary	INDEP	independent pronoun
CAUS	causative transitivizer	INSTR	instrumental
CISL	cislocative	INTR	intransitivizer
COMP	complementizer	IRED	initial reduplication
CONJ	conjunction	IRR	irrealis
CONJCT	conjunctive	LOC	locative
CONT	continuative	MID	middle marker
CUST	customary/habitual	NEG	negative
DEM	demonstrative	NOM	nominalizer
DEON	deontic modal	OBJ	object marker
DEP	dependent	OBL	oblique marker
DET	determiner	PASS	passive
DIR	directive transitivizer	PERF	perfective
DITR	ditransitive applicative	PL	plural
EMPH	emphatic	POS	positional
EPIS	epistemic modal	POSS	possessive
ERG	ergative case	PROG	progressive
EXIS	assertion-of-existence	REP	reportative
EVID	evidential	SG	singular
EXP	expectational	STAT	stative
FRED	final reduplication	TR	transitivizer
FOC	focus marker	UNSP	unspecified
FUT	future	U.POSS	unrealized possessor
		YNQ	yes/no question

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